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N. E. FARMER.

ASCENT OF SAP IN PLANTS.

Boston, April 16th, 1844.

To the Editor of the New England Farmer:

Dear Sir—The following experiment which I made yesterday, may interest some of your readers. My object was to ascertain the rate of ascent of the sap in a grape-vine, at different periods of a day, and to exhibit to my pupils the propulsive force which raises it in the stem of a plant.

April 15th, 1844.—The lowest branch of a grape-vine, having four branches, was cut off and an open glass tube was attached firmly to the cut extremity, by means of a strip of sheet India rubber, tied with stout silk. The tube was fixed perpendicularly against the wall on which the vine was trained, and a pasteboard scale of inches was attached to the tube.

The sap began to be effused immediately.

8 h. 25 A. M. Experiment commenced, and the fluid rose as follows:

at 8.52	"	to 1½ inch.
9.18	"	3 "
10.25	"	5 "
11.53	"	7 "
12.30	"	8¼ "
1	P. M.	9 "
1.45	"	10 "
2	"	10½ "
3.45	"	14½ "
5	"	15 "
6.15	"	17 "
7.30	"	19 "
8	"	20 "
8.30	"	21 "
11.30	"	26 "

Here the experiment stopped, for the sap had reached the mouth of the tube.

This experiment is worthy of trial on various plants at different times during the developement of the leaf-buds, and I hope others will be induced to try it.

It is evident that the sap forming the common juice of plants, rises by a propelling force similar to that which causes its rise in the tube of an endosmometer. Dutrochet says it will sustain a column of mercury 28 inches in height.

I cannot at this time enter upon the discussion of questions concerning the theory of the elevation of the sap in plants, beyond the expression of the opinion that it cannot be accounted for by capillary attraction nor by atmospheric pressure; for, in the first case, we cannot by capillary attraction, account for the rise of the sap beyond the cut extremity of the vine; and in the second, we cannot conceive how the pressure of the atmosphere could act in the case, where it is as great in one part as in the other, and where a vacuum cannot be produced, on account of the porosity of the woody tissue. Even if a vacuum was effected by the absorption going on in the buds, how could the ascent of the sap beyond about 30 feet, be accounted for? Is not its rise due to the action of membranous partitions, just as takes place in the endosmometer of Dutrochet?

Respectfully, your ob't serv't,

CHARLES T. JACKSON.

For the New England Farmer.

BENEFIT OF MIXING SOILS.

Mr Editor—I was gratified with the communication of L. Bartlett, Esq., on Sulphuretted Hydrogen, in the Farmer of the 3d inst. There is no doubt but *any* mixture of soils, or *any soil* from a considerable depth brought to the surface, will act efficiently as manure, and in many cases very powerfully. Some 16 years since, I built a house, and the earth from the cellar was used for grading. The bottom dirt, which of course came on top, was a fatty blue clay, with a strong sulphur smell. At the east end it was proposed to have a garden, and I intended to haul on a covering of other earth, but other business prevented, and it was planted with cucumbers, squashes, &c., which, much to my surprise, exceeded every thing else in the garden, and for the three years I occupied it, it maintained its superiority.

A few years since, while walking in the lower yard of the Maine State Prison, I observed a patch of corn, cucumbers, &c., growing so very rank as to induce me to ask the warden what was used for manure. He said, "Nothing—they were planted on earth dug from the bottom of the quarry by some of the convicts, and nothing else was put on them." This was a light yellow loam, lying between the joints of the lime-rock, and brought from a depth of 50 or more feet, and did not look as if any thing would grow on it.

I have within a few years fertilized a mere clay bank, by bringing on soil from the road-side; and *any* mixture of soils of different qualities, so far as my experience extends, will improve the crops equal always to the expense incurred, and often much more. B.

Kennebec Co., Me.

MIDDLETOWN FARMERS' CLUB.

From the report of the discussion on "Producing and Using Manures," at the second meeting of the Middletown (Ct.) Farmers' Club, published in the Conn. Farmer's Gazette, we make the following extracts:

"Judge Coe remarked, that the right application of manure depended much upon the nature of the soil. Heavy land would profitably bear a larger application at once, than a lighter soil. It was his opinion that the purchase of manure was rarely to be advised. That a farmer should depend principally upon his barn-yard for a supply, and the resources upon his own farm. A compost of turf, ashes, mud, lime, &c., might sometimes be made with advantage, for a top-dressing for grain or grass land. The best time and way to apply manure to corn and potatoes, is in the spring, and before it has fermented. It should be covered, but not deeply. It should be near enough to the surface to feel the influence of heat as well as moisture. In the management of a farm, the grand object in applying manure, as well as in arranging the crops, should be permanent improvement, and not merely the obtaining one great crop. The most valuable manure, according to his experience, is sheep dung—and pasturing by sheep is an admirable method of improving poor land. Judge Coe instanced a tract of land in his own possession, improved in this way two or three hundred per cent. He has found manure to be better, much better, for being kept under cover until used. He thinks well of the effect of ashes, and is satisfied that dry ashes are the most economical. He had had a long and favorable experience in the use of plaster of Paris. It is most profitable in small quantities, and thought it best, for top-dressing, to apply it directly after mowing. Had used it with advantage in the hill for corn and potatoes. It is not a preventive of the cut-worm, but tends to invigorate the plant and put it beyond the worm's reach. Judge C. thinks grass the most profitable crop raised, if land is adapted to it.

Mr Wm. Plumb said he had made much use of lime, but with little or no advantage on his heavy land, while his light soil had shown a decided improvement in consequence.

Mr Charles Hubbard stated that dry ashes had the best effect upon his corn by applying them in the hole before the corn is planted—but said that a mixture of plaster and ashes was better than ashes alone."

LIMA BEANS.

To have a good vegetable garden, should be the aim of every man—and woman too, who has the occupancy of a *patch* large enough to make one. Many people seem to think that vegetables are vegetables, and it matters not what is the quality, if in quantity they do not fall short. We would remind such that some good things are a great deal better than some other good things—and among the best of garden vegetables we class the Lima bean. It is a tender plant, and needs careful culture. Plant from the middle to the last of May: having the soil made rich and deep, cover slightly with fine mould, and set the poles at the time of planting. For *succatash* in summer or winter, there is no variety that can be compared with the Lima.—*Conn. Far. Gaz.*

Broom Corn.—Immense quantities of broom corn are raised on the Connecticut river, in Massachusetts. It yields about 1000 lbs. of brush, and 60 to 70 bushels of seed to the acre. The brush sells for 5, and sometimes as high as 12 cents the pound, and the seed at 33 cents per bushel. Its cultivation is like that of the Indian corn.—*Ib.*

Manure for Melons.—It is contended that hen-dung is equal to pigeon dung, in producing a large quantity and fine quality of melons.—*London Gard. Chron.*

MELONS.

Among the fruit of this kind, there is probably no class which is so universally a favorite as this. It is easily cultivated, and is always sure to bear something; enough to repay for the care bestowed. The two difficulties in the way of success, are these: to protect the plants from the attacks of insects—and drought. The striped rose-bug, as it is commonly called, attacks the plants of the melon as soon as they show their first pair of leaves: they are usually tender, and if cut off at once, either kill or very much weaken the plant. Sprinkling with ashes, lime, or soot, has been much recommended; but when the bugs are numerous, they cannot be kept off in this way.

Since last summer, I have had some very fine seed sent me, and with it the assurance, that sprinkling with sulphur is effectual against the striped bug—and that a little camphor-gum near the plants will keep off the pumpkin bug, which appears later, and sucks the juices from the vines. These two things I think worthy of trial. But the most effectual preventive is a small box with a pane of glass for its top, which can be pressed down over the hill; this will bring the seed up quick, and be not only a protection against the bug, but will keep off cold winds and frosts, if there should be any. But it must be taken off a part of every day, so that the plants may have air, and not come up too weak. After the third pair of leaves, they get so much advanced that the bug cannot well destroy them, and then the dusting with lime or sulphur will be beneficial.

The best protection against drought, is to prepare the ground by manuring well with cow manure, and plowing deep—twice before making the hills. The manure for melons should be old and light.

The practice in some sections, where they raise melons for market, is to make a hole for each hill about 18 inches square, and the same depth, after the ground is well prepared; this they fill in with rotten turfs, light manure and rubbish, well mixed together with the earth. Into this the roots of the melons run, and do not easily feel the effects of dry weather. The best melon bed that I have ever seen, was made by turning over in the spring a piece of turf ground, which was light and in good heart.

Four feet between the hills is little enough for musk melons, and six for water melons. They want hoeing for the first three or four weeks often, and in the morning when the dew is on: after that, the surface should be kept clean and loose, so as to receive the small showers. A shoving hoe is best for this purpose, as it does not disturb the vines. Care should be taken to keep the seed pure, by planting different varieties at as great distance from each other as possible. They will mix, too, with cucumbers, pumpkins, and so on.

Melon seeds will retain their vitality for ten years and more, and are more productive than when fresh, as they do not run so much to vines; it is therefore advisable, for a man who has a good kind of melons, to save as much of the seed the first year as he can, and plant several years from that.

The best varieties of the water melon are the Black Spanish and Imperial; of the musk, the Nutmeg, when it can be gotten good, is the best—at least, I like it best.—*Western Farmer and Gardener.*

From the London Gardener's Chronicle.

AMERICAN BUG.

The following is from "Waterton's Essays on Natural History." After mentioning several ineffectual applications, such as unctuous preparations, decoction of walnut leaves, spirit of turpentine, for destroying the downy white insect, or American Bug, on apple trees, the author says: "Despairing of success, I was on the point of quitting the field, and leaving the bugs in undisturbed possession of it, when I began to conjecture that I had not gone the right way to work. I reflected that none of the applications could have penetrated sufficiently deep into the curved and knotty sinuosities of the diseased parts, and that on this account there would be a sufficient force of the enemy left alive to recommence its depredations at the first favorable opportunity. Wherefore I concluded that nothing short of the entire destruction of the eggs, the young, and the adult, could save the trees from ultimate ruin. Knowing that the bug could not exist if totally deprived of air, I resolved to bury it alive, and this I effected by an application at once the most easy and simple that can be imagined—it costs nothing. I mixed common clay with water till it was of a consistency that it could be put on to the injured parts of the tree, either with a mason's trowel or with a painter's brush. I then applied it to the diseased places of the tree, and it soon smothered every bug; a second coat upon the first filled up every crack which showed itself when the clay had become dry, and this resisted for a sufficient length of time the effects both of sun and rain. The sickly parts, now effectually freed from the enemy which had been preying on their vitals, were placed in a state to be cured by the healing process of nature, and that nature has done her duty, my apple trees amply testify."

"THE FARMER OF MOUNT VERNON."

Washington was passionately fond of agriculture. Its improvement was ever with him an object of paramount regard. Virginia can boast of few sons to whom her agriculture has been more indebted; few who have assisted in promoting its interests to a greater extent or with the manifestation of a more ardent and patronizing zeal. The following account of his farming operations, will serve to exhibit the Father of his country in his true light. "The farm of General Washington at Mount Vernon, contained 10,000 acres of land in one body—equal to about 15 square miles. It was divided into farms of convenient size, at the distance of 2, 3, 4 and 5 miles from his mansion house. These farms he visited every day in pleasant weather, and was constantly engaged in making experiments for the improvement of agriculture. Some idea of the extent of his farming operations may be formed from the following facts: in 1787, he had 500 acres in grass—sowed 600 bushels of oats—700 acres with wheat, and as much more in corn, barley, potatoes, beans, peas, &c., and 150 with turnips. His stock consisted of 140 horses, 112 cows, 235 working oxen, heifers, and steers, and 500 sheep. He constantly employed 250 hands, and kept 24 plows going during the whole year, when the earth and the state of the weather would permit. In 1786, he slaughtered 150 hogs, for the use of his family and provisions for his negroes, for whose comfort he had great regard."—*Maine Cult.*

For the N. E. Farmer.

LIEBIG'S REMARKS ON SAUSSURE'S EXPERIMENTS ON THE ABSORPTION AND ASSIMILATION OF HUMUS BY PLANTS.

Liebig observes that the plant in Saussure's first experiment, "had not taken up a corresponding quantity of humus for each part of carbonate of potash." The solution of humus contained at the beginning of the experiment, 70 parts of humic carbonate of potash, composed of 52 parts carbonate of potash, and of 18 of humus. At the end of the experiment, "there remained 9 humus, 11 carbonate potash, consequently it had absorbed 9 humus, and 41 carbonate potash." Now, continues L., "the plant ought to have absorbed 14 parts of humus with 41 of carbonate of potash; with 11 of carbonate of potash, only 4 parts of humus should have remained. It is, therefore, evident, that a separation of the potassa from the dissolved brown substance took place, which must have been produced by the roots of the plant; they had taken up the salt of potash, and left the humus in the remaining liquid."

On the second experiment of Saussure, (see N. E. Far. 10th inst.,) L. remarks, that the liquid, contrary to that of the first, was deeper colored at the end, than at the beginning. "The fluid contained $\frac{1}{5000}$ of humic carbonate of potash," yet, with this excessive dilution, "the coloring substance did not pass over in equivalent proportion with the potash into the plant, but was left behind."

In the third experiment, the reader will have observed that a solution of extract of mould, without a plant, was placed beside that containing a plant; also that the liquor of the first, gave at the end of the experiment, 0.6006 of a grain of residue, while the last afforded 0.5082. The fact of *disappearance* of humus, therefore, L. does not question. He admits that, and also the experiments of Saussure proving the evolution of carbonic acid from moistened humus, or its alkaline solution, and then remarks on the 1st experiment of Saussure, that "it remains perfectly undecided under what form the 9 parts of humus, which had disappeared, had been taken up." On this point he adopts, or rather advances, a twofold explanation, at one time referring it to carbonic acid, and at another, to the salts of mould. "This aqueous extract of mould contained, however, according to the examination of De Saussure, nitrate of potash and soda, as well as chloride of potassium and chloride of calcium; substances which are very easily absorbed by the roots of plants. It is evident that these soluble salts passed into the plant in a manner precisely similar to the absorption of the carbonate of potash, described in the previous experiment; and the diminution of weight, which the soluble component parts of the fluid (in which the plant vegetated) sustained, finds, in this circumstance, a perfectly satisfactory explanation."

If the reader recurs to the question asked by L. in his "summary," (see N. E. Far. of 17th inst.) why Saussure had taken no account of the influence of the atmosphere, &c., he will see that Liebig leans to the opinion that the humus has disappeared only as carbonic acid. It will be remembered that one of the three circumstances pointed out by Saussure (see N. E. Far. of 10th inst.) in his 3d experiment, was, that the comparing solution of mould became turbid. On this point Liebig remarks: "In the test fluid a change was produced, as De Saussure states, by action of air. It became

turbid, whilst the fluid in which the plants vegetated, remained clear. It was necessary, as a matter of course, that the latter should undergo a similar change, since the air was not excluded from the vessel; but, in consequence of the presence of the plant, this occurred in another way. The action of air, on the extractive of mould dissolved in water, is limited by the absorption of oxygen; carbonic acid is formed, which remains dissolved in the solution, and a brown or black deposit of the oxydated humus, as it is called, is generated. The formation of carbonic acid and this deposit go on independently of each other; but in the fluid which contains the roots, the carbonic acid formed is perpetually removed. It cannot contain either free carbonic acid or free oxygen, simply because both are absorbed. In the latter arrangement, then, all the conditions are present for allowing the air to act continually on the organic matter contained therein."

Here, again, we find Liebig ascribing the disappearance of the humus to the formation and absorption of carbonic acid. If he so thinks, the only question at issue is, the assimilation of the disappeared humus. On Liebig's view, this can no longer be a question. The fundamental of his doctrine is, the assimilation by plants of the carbon or carbonic acid. This last is the only source of the carbon of plants, says Liebig. On this question of assimilation, we will present the views of Saussure in your next paper—remarking now on some assertions of L. above quoted.

1st. It has always appeared singular that Liebig has never offered experimental proof of the soundness of his own views of the action of mould. We have now his reason: he believes all Saussure's experiments incapable of a definite result. If, then, the amount of *humus* absorbed by roots cannot be ascertained, neither can the amount of carbonic acid so absorbed, be defined. L.'s reasoning is, therefore, equally conclusive against his own views, so far as the roots are concerned.

2d. Liebig states in his Agricultural Chemistry, third Cambridge edition, pp. 65, 67—"Each new radicle fibril which a plant acquires, may be regarded as constituting at the same time a mouth, lung, and a stomach. The roots perform the function of the leaves, from the first moment of their formation. A plant gains another mouth and stomach with every new fibre of root." This doctrine is decided. It is explicit. Consequently, the amount of carbon absorbed, either as carbonic acid or as humus, by the roots, must be dependent on the developement of the plant. What reason, then, has L. to assert that a growing plant will absorb in 100 days the same proportional quantity it has in 14? His own doctrine teaches us to expect a different and increasing quantity.

3d. The assertion that humus is insoluble in water, because our springs and brooks are colorless, is refuted by common and every-day observation. The most casual observer sees brooks and rivers deeply colored by vegetable matter. Rain-water is highly charged with it. In these cases, it exists dissolved. The most colorless water, alway holds dissolved in it organic matter in some shape, in some form of humus or mould. All natural waters have this common character. It cannot be gainsaid. No argument, then, can be reasonably drawn from this source, against the doctrine of Saussure. S. L. D.

Lowell, April 18, 1844.

From the Maine Farmer.

USE OF LEACHED ASHES AS MANURE.

Dr. Holmes—Having read with a good deal of interest the communication of Mr Stetson on this subject, in No. 6 of your paper, I have thought that possibly some one of your numerous subscribers may be interested, and perhaps profited by the "relation of my experience."

Twelve years ago, some time in the month of June, I turned over a quarter of an acre of green sward, for the purpose of raising a crop of ruta bagas. My manure had been so nearly "used up" for other crops, that, by close scraping I was able to get but one cart-load; to this I added one load of leached ashes—probably about 30 bushels. This formed a dressing for the piece, scanty as it was, and it produced a fair crop of turnips. The next year, the land adjoining was broken up, and the whole planted to corn. This piece of ground has been treated ever since exactly in the same manner as that on each side of it, and in every crop, except the first corn crop, there has been a perceptible difference in favor of the piece on which the ashes were put; and the last season, a greater difference than ever before. The field had been mowed so long as to be what we term "bound out," that is, producing nothing but spear grass, except on this quarter of an acre, which had twelve years before received the dressing of leached ashes; on this there was a crop of red and white clover, very thick, but short; the contrast with the adjoining parts of the field was so great as to be distinctly seen at the distance of half a mile. It was the opinion of the man who assisted me in haying, that this quarter of an acre produced three times as much hay as an equal piece on either side of it, and in his opinion I fully concur. The land is high and gravelly.

Now, Mr Editor, I have a two-fold object in making this communication thus particular—that those who leach ashes may not suffer them to be washed away as valueless, and that the experience of others may be elicited.

I should not do well to close this communication without expressing my thanks to Mr Stetson for his article on this subject. I recollect that some years ago, I planted a piece of potatoes on land upon which leached ashes had previously been pretty freely used, for raising turnips. The potatoes were very scabby, but it never occurred to me that ashes produced that effect, till I read Mr Stetson's communication. I have no doubt of it, and shall be able to avoid a like occurrence.

Will some one tell us what fertilizing property is left in ashes after the alkali is exhausted? In the case which I have stated, the twelve years' leaching must have been sufficient to get out all the potash. N. FOSTER.

East Winthrop.

☞We would suggest to friend Holmes, of the Maine Farmer, that if he would copy into his paper the section of Dr. Dana's Essay published in our last number, he might furnish his correspondent some information on the subject of his question. Dr. Dana says, (Essay, p. 34,)—"In ashes, we have one part which may be leached out, and a part which remains after leaching, called spent ashes. Let us see then in leaching, what parts we take away. First, we take away all the acids except the phosphoric. Secondly, we take away nearly all the potash and soda. What is left? The phosphoric acid and all the bases. It is evident, therefore, that the strength of ashes can never wholly be leached out, if that depends upon the salts. In spent ashes we have nearly all the bone-dust left; and besides this, a portion of what is usually considered the real strength, that is, the potash. This is chemically united to certain of the other constituents of ashes. *You cannot leach it out, leach you never so long.*"

AMMONIA—IMPORTANT SUGGESTIONS

Dr. Lee, of Buffalo, one of the editors of the New Genesee Farmer, (who, in addition to much scientific learning, has the advantage, as he states, of having been "bred a farmer,") in an article on charcoal as an absorbent of ammonia, remarks:

"When I stated, in the January number of the Farmer, that twenty years' experience had taught me the great value of charcoal to absorb the fertilizing ingredients in urine and manure, I published a fact of considerable importance to the practical agriculturist. Let any one take an old barrel that will hold water, fill it with pounded coal, place it under his wood-shed, and empty his chambers into it, until the coal is saturated with human urine. Not a particle of ammonia, or of any offensive gas, will escape till the coal is saturated. Then apply this substance in the quantity of a tea-cupfull to a hill of corn or potatoes—*in* the hill.

"Dissolve one-fourth of a pound of sal. ammoniac, which will perhaps cost 6 cents, in two quarts of hot water, and when reduced to blood-heat, put two quarts of seed corn into it to soak. Let it remain eighteen hours, then plant in a row by itself, after it has been rolled in plaster. (I have soaked some in urine with good effect.")

If ammonia is of such great use in promoting the growth of plants, as has lately been claimed for it, it seems to us that the above suggestions—particularly the first—if put in pratice, would demonstrate conclusively the value of this gas as an aid to vegetation. We would esteem it a favor if some of our readers would test the above suggestions the present season, and give us the results. A half barrel, or vessel of less size even, might be used to put the pulverized charcoal in, if it be desirable to saturate a quantity in a short time, or before planting time arrives. The coal should not be used until it is certain that it is thoroughly saturated,—and this, according to Dr. Lee, may be ascertained by the smell: that is, no offensive odor will arise until the coal is fully saturated.

Nitrate of Soda for Strawberries.—The proportion in which nitrate of soda has been successfully applied to strawberries, is three ounces to the square yard, sprinkled regularly over the surface of the bed, just as the plants begin to grow. Although it may injure the foremost leaves, the succeeding ones will soon put forth with redoubled vigor.—*Gard. Chron.*

Valuable Salve.—Take three carrots and grate them; place in a vessel and cover with lard, without salt. Boil thoroughly, strain, and add sufficient beeswax to make a paste. This is a most invaluable ointment or salve, for cuts, burns, scalds, or wounds of any kind.—*Sat. Cour.*

The weekly average of deaths in London for the last five years is stated at 946.

From the Magazine of Horticulture.

GUANO—ITS ACTION ON THE GROWTH OF VARIOUS PLANTS, FRUITS, &c.

I have already stated that I had numerous experiments in progress which were destroyed by fire: as there is no prospect of my resuming them at present, I will offer a few ideas upon which several of them were based, in order that those who have leisure may pursue them.

The ultimate object of vegetable life appears to me to be the production of seed. To this purpose, and to accumulate the properties and ingredients for the formation and perfection of this seed, the root, stem, leaf and flower are devoted—each performing its destined gradual part, until by their united efforts, brought into action by soil, light, heat and moisture, this object is attained; exterior vegetable action then declines until another season. Experiment has shown that plants grown on mere sand, with the assistance of water, will throw out stem, leaf and flower, nay even the forms of seed, but these will be mere integuments, empty vescicles or little bladders;—also, by constantly stimulating, with peculiar manure, we can throw plants into such uninterrupted luxuriance of shoots and foliage, that often the flowers, and more often the seeds, do not appear within the limits of the season. Combining these views with others on the production of double flowers, and with some suggested by various experiments on guano, it seems highly probable that certain manures are particularly conducive to a luxuriant growth of stem and foliage, while others are peculiarly so to the production of numerous and well filled seeds. As it would be impossible for me, at the present moment, to develop all my ideas and experience on this subject, I will endeavor briefly to elucidate it by a supposition, which, like those in algebra, may or may not be near the truth.

Suppose the nitrogenous *(ammoniacal)* and alkaline *(potash and soda)* manures to be those chiefly instrumental in producing stem and foliage, then nitrate of soda will be valuable for this purpose; and if the soil itself contain the ingredients of the seed in a fit state for absorption, the plant thus thrown into a state of luxuriance, will be enabled to draw from it sufficient to make plenty of good seed. But if the soil in itself contains them very sparingly, then this excess of stem and foliage, although containing a quantity of nitrogenous and palatable food for cattle, will be deficient in rich seed. Now we know that phosphate of lime and of magnesia, with sulphurous compounds, exist in all seeds useful to man and animals—these, however, do not form part of nitrate of soda and potash, hence the latter can only assist the plant in extracting them from the soil.

Suppose, secondly, we use a manure combining the nitrogenous principles in the shape of urates, &c., with the alkaline phosphates, sulphates, muriates, &c., then even on the poorest soil, while the ammoniacal portion is performing its office of causing luxuriance in foliage and stem, the ingredients of the seed are offered in abundance to the root. This is exactly the predicament of guano—most of the salts in which are soluble in water—and those which are not, such as the phosphate and oxalate of lime, become so when combined near the roots with the carbonic acid furnished by the humus, as well as by other portions of the manure.

The use of a solution of guano in water, is therefore good, when the seed is not required; but where it is, the deprivation of the insoluble phosphate of lime is very injurious.

Hence, from the proper use of guano, a luxuriant vegetation is followed by the production of a large crop of fine seed. As a farther elucidation of my views, I will state that the manure made use of for the purpose of producing double flowers, is the highly nitrogenous stable manure, which is used in such quantity as to prevent the roots from coming into contact with that part of the soil containing the ingredients of the seed: this manure being then chiefly favorable to the production of foliage alone, if continued through many generations, will, by degrees, convert the stamens, pistils, and the parts destined by nature to prepare the seed, into leaves or petals, and finally obliterate the seed. These flowers, if grown in a poor soil, scarce in nitrogenous substances, will again, as is well known, revert to their normal single seed bearing state.

Several of my experiments with guano proved to me that it shortened the internodes, or portions of the stem between each leaf: this was particularly evident in seedling orange and lemon trees, and is a sure indication of fruit or seed bearing: indeed, the spurs, which are well known as the fruit-producing parts of many trees, are but shortened branches, where the internodes are reduced to a mere nothing, and where, consequently, the axillary action is concentrated into a small space. I have, therefore, no doubt of the beneficial action of guano on fruit trees. Many experiments are, however, yet desirable. Such as whether guano acts beneficially on the receptacle of the seed, which is the fruit of the strawberry or raspberry;* whether on the exterior covering of the seed, which is the apple, peach, plum, &c.; or on the kernel or nut, or on the pulpy envelop of the seed, as the gooseberry, grape, melon, gourd, &c. I hope that these ideas will give rise to numerous experiments this year, and that those who make them will not hesitate freely to communicate them for the general benefit.

I will merely add farther, that I should consider it advisable, in all experiments on fruits, to try both the guano itself as well as a weak solution of it in water. It is highly probable that the solution will be efficacious where the receptacle or the exterior of the seed is most valuable; whereas in corn, peas, beans, &c., those phosphates which are insoluble in water, and are very necessary, would be thus lost to the plant.

At another period I may possibly resume this subject, as it seems to me that these ideas open new views on the physiology of plants, and certainly show of how much importance it is for those who study this subject, to become better acquainted, from personal observation, with the action of the soils on vegetable life. It is from the want of this knowledge that the greatest errors have been proposed and propagated as truths, by scientific men.

Yours,

J. E. TESCHEMACHER.

Boston, March, 1844.

*Mr T. requests us to correct an error here, which occurred in the haste of composition. The fruit of the raspberry is represented as the receptacle: he intended to invite attention to this fruit as being a specimen of the berry, *(acinus.)*—Ed. Far.

When we take people merely as they are, we make them worse; when we treat them as if they were what they should be, we improve them, as far as they can be improved.—*Goethe.*

DANA'S PRIZE ESSAY ON MANURES.

Section Thirteenth.

Manures Composed chiefly of Mould.

These are of vegetable or animal origin. And first, of animal mould. Here we shall find that we come perhaps better prepared to understand this part of our subject than either of the preceding classes. We have explained the principles which enable us to understand why it is that animal and vegetable substances produce, by decay, identical matters. The only difference consists in the quantity of these matters. Let me here, reader, call to your remembrance the facts we stated respecting the two classes of food, and the two classes of substances formed from that food by animals. A certain portion of that food contains none of that principle which forms ammonia. This portion of food makes fat. Another porton of food contains the substance which forms ammonia. This part of the food forms flesh and blood, and the other parts of the body, skin, hair, feathers, bristles, wool, horns, hoofs, nails and claws, thews and sinews. Now, when a body dies and decays, the mould which it forms will be rich manure, or poor manure, just in proportion as it contains more or less of the substances formed out of that portion of food which furnishes flesh and blood. The fat, therefore, in animal mould, plays a very inferior part to that acted by the flesh and blood. In a word, as I wish to dismiss the fatty matters from our present consideration, I may do this, reader, by stating to you all that you need know, that in decay, fat forms chiefly carbonic acid. If, therefore, you call to mind what we have said about the action of that, you will see how fat acts in manure. But the flesh and blood, and the substances formed from it, give precisely the same things as vegetables do when they decay, that is, water, mould and salts. The great difference between the decay of animal and vegetable matters, is this: that as the animal bodies are far richer in the substance which forms ammonia, so they afford a richer source of manure. The animal body contains that element, in quantity enough, not only to fill the pores of its own mould, but also enough to impregnate a large quantity of mould from other sources. The vegetable body, on the contrary, contains scarcely enough ammonia to fill its own mould. Vegetables differ in the quantities of the elements of food which can furnish flesh and blood, and hence those vegetables are best for manure which furnish most ammonia. We have already remarked on the difference, in this respect, between straws, grasses, and clover. But without going further into this comparison, which can have no other practical bearing than to show you the immense difference in value, in animal and vegetable bodies, in forming manure, we may here resolve the subject into one great principle. The substance which forms flesh and blood, whether derived from plants or animals, alone forms ammonia during their decay, and the mould thence arising, is rich or poor manure, just in proportion as it contains the substance fit to form flesh and blood. Starting from this principle, we find that animal substances, as flesh, fish, fowl, the body generally, including its various forms of covering, hair, wool, feathers, nails, hoofs, horns, claws, &c., afford, in the process of decay, about ten times more ammonia than the straws and grasses usually entering into the compost heap.

The animal bodies give more volatile alkali than

their mould can contain. It is given off in such quantity that decay is rapidly hastened. All the signs of putrefaction, therefore, rapidly take place. The quantity of mould being small, nothing holds the volatile parts—they escape and are lost. Now, common sense and practical foresight have stepped in here, from time immemorial, and taught mankind the necessity and the utility of preventing the waste of the volatile and most valuable parts of the decaying animal substances, by covering them in with earth, soil, &c. These imbibe the escaping virtue or strength, and become rich and fertilizing. It remains to state, that every pound of animal carcass can impregnate ten pounds of vegetable mould; or, taking our arable soils as they usually occur, one pound of flesh, fish, blood, wool, horn, &c., can fertilize three hundred pounds of common loam.

You will see, therefore, reader, how little you have now to learn of the necessity of saving every thing in the shape of animal matters, and converting them to manure, by turning them into your compost heap. It is to be remarked, that the dry forms of animal substances undergo the process of decay very slowly, when left to their own action. Wool, hair, flocks, horn-shavings, &c., or even leather chips and curriers' shavings, bear long exposure, and seem quite indestructible. They yet are rich in all the true virtue of manure. They want something to bring this out, to set them a working, to bring on fermentation. Well, on this head we may lay down two rules; the first is, that if buried among a heap of fermenting matter, that communicates a similar change to these dry, animal substances. This is slow work. The second rule is, that if these dry matters are buried in the soil among the roots of growing plants, then these act more powerfully than fermentation, and the dry substances are converted to manure with a speed which may be called quick, compared to the fermenting process.

The practical lesson to be drawn from these differences of action between the fleshy and horny parts of animals, is, that when you want a quick and short action of manure, to use the fleshy and fluid parts: where you want a more slow and permanent action, to commence and long last after the first is over, to use the dryer and harder parts.

If now we turn to the other division of mould, that from vegetables, we find it lacking in the very thing which was superabundant in animal mould. That thing is volatile alkali. The great mass of vegetable mould is always impregnated, but always slightly charged with volatile alkali. There is not enough of the flesh and blood forming element in vegetables to hasten the decay of vegetable matter, or to convert them after decay into rich manure. Now here, again, not science, but practical common sense steps in, and did step in long ago, and as she taught mankind the necessity of adding soil or mould to the decaying animal matter, so here, to enrich vegetable mould, she teaches that animal matter, or that which is its representative, *alkaline salts*, must be added to vegetable mould, to make it active. It is not the mould alone which plants want. We have seen all along how nature provides a certain amount of salts in her virgin mould: we by cropping exhaust these faster than the mould. We have tons of that, yet our fields are barren. They want, as has been explained, *salts*.

[Concluded in our next.]

For the New England Farmer.

THE WART ON PLUM TREES.

Mr Breck—Sir—The disease called the '*wart*' in plum trees, is, I believe, generally ascribed to an insect. This ascription is doubtless correct, but there are some facts connected with the progress of this disease, for the existence of which none of the theories advanced—not even excepting that of the "Insectarians," is adequate fully to account.

I have noticed that of many trees standing in a certain lot, not a single *unproductive* tree has been injured or even attacked by this disease; while of the residue, not an individual has escaped. On another lot, four trees, in cultivated soil, have been ruined after a course of several years' bearing; while in a green-sward yard, on the same premises, and within six rods of the former, four trees are standing which have for years been unproductive, and also unharmed by the disease. The latter have uniformly blossomed abundantly, but have cast unripe fruit,—one for a period of nearly thirty years, and the remainder for about ten or twelve. The general appearance of these trees is, nevertheless, healthy, and the bark smooth, and free from schirrous protuberances, wounds and moss. Can any one explain? W.

PREPARATION OF CLOVER SEED.

We have received two communications from Joseph Warbasse, of Newtown, N. J., on his mode of preparing clover seed for sowing, by which the writer calculates he makes a saving of one-half he seed required. Mr Warbasse's process seems to be predicated on the assumed fact, that ordinarily more than one-half of the seed sown does not germinate, either from the want of moisture to swell it, or of gypsum, the presence of which he considers essential to stimulate the germinating principle. Mr Warbasse is probably right in saying that one-half the clover seed sown does not come up; and he is strengthened in his supposition that much of it remains dormant in the soil, by the fact he states, and which is of common notoriety, that plaster sown upon light lands, will bring in clover, where no seed is sown at the time. Mr Warbasse's remedy for the evil is, to saturate and swell the seed thoroughly in soft water, to which a small quantity of salt is added, and after it has become well saturated, to coat it with gypsum, &c., the effects of which seem to be to prevent the escape of moisture which the seed has imbibed, and thus insure its germination and growth A further advantage may be, that the salts impart fertility to the soil which comes in immediate contact with the seeds, and causes a more vigorous growth. Such seems to be the philosophy upon which Mr. W.'s practice is founded. We give the process of preparing the seed in his own words:

"The seed is to be made thoroughly wet with a strong pickle from your pork cask; let it remain in a heap one day; then spread it about one or two inches thick on a dry floor, and in a few days a crust of salt will be formed on each grain. When you wish to sow it, moisten it again with pickle, spread it over a floor, and put on about three quarts or more of plaster to a half bushel of seed; mix it well, and keep it moist in a cellar until you sow it."—*Yankee Far.*

Beware of *little* expenses—a small leak will sink a great ship.—*Franklin.*

SELECTIONS

From the London Gardeners' Chron. & Agricul. Gaz.

To Correspondents. *Vines.*—"R. W."—The check which takes place at the extremities of your vine shoots after the latter have grown from 6 to 12 feet, is probably occasioned by want of sufficient moisture at the roots.

Onions.—"A Subscriber."—Guano is an excellent manure for onions. To a bed 20 yards long and 4 feet wide, you may apply 25 lbs. It being of a hot burning nature, must be well mixed with six or seven times its bulk of good light soil. The onions may be sown in drills, about nine or ten inches apart, drawn lengthwise of the bed.

Asparagus.—For manure, guano mixed with sea-salt, and applied in a liquid form, has proved most beneficial.

Temperature for Cucumbers in Hot-beds.—A thermometer plunged into the mould of the bed, about three inches deep, should indicate 80° of heat, which is a safe temperature for the plants.

Fruit Trees.—"Abdalon."—Your apples and pears are for the most part subject to canker. They are old varieties. Your soil has doubtless its share in causing the disease; but you had better get new kinds. If you cannot procure rich loamy soil, the *sward of any soil* will certainly prove beneficial. We would still advise you to cut away all unsound wood. Lime will be best applied in a quick state, early in spring. It should be spread over the surface of the ground, and dug or forked in so as not to injure the roots.

Analysis of the Raspberry.—The following is the analysis of the raspberry, which I extracted from some work, but the authority I neglected to note down:

Silicic acid,	0.25
Phosphate of lime,	3.65
Carbonate of lime,	3.40
Potash,	5.24
Soda,	0.50
Ox. manganese,	1.00
	14.04

It was stated that the raspberry most generally springs up where fields had been burnt over, and also by the sides of decomposing stone walls.—*W. P. Keane.*

"Ought Potatoes to be Cut or Planted Whole?"—I am in the habit of planting five or six acres of potatoes yearly, and for the last two years I have planted the greater part with whole potatoes, and find they produce as good crops as cut seed, with this great advantage—I have scarcely a potato that misses growing; whereas with cut seed, I have often had a great loss from dry rot. When taking up the general crop, I pick out for my seed potatoes those of a uniform size. I plant in rows two feet apart, and one foot apart in the row, and have had exceedingly good crops.—*A. C. Horncastle.*

Truthful Sentiment.—We live in the midst of blessings, says a late writer, till we are utterly insensible of their greatness and of the source from whence they flow. We speak of our civilization, our arts, our freedom, our laws, and forget how large a portion of all is due to Christianity. Blot Christianity out of the page of man's history, and what would our laws have been? what our civilization?

NEW ENGLAND FARMER,
AND HORTICULTURAL REGISTER.

Edited by Joseph Breck.

Boston, Wednesday, April 24, 1844.

STATE SOCIETY'S CATTLE SHOW, &c.

We are gratified to learn that the Massachusetts Society for the Promotion of Agriculture have decided to hold a grand Cattle Show and Exhibition of Agricultural Implements, Dairy Products, &c., at Worcester, on the 9th and 10th of October next. We shall probably be able to give the list of premiums in our next number. The well-directed efforts of this Society for the encouragement of agricultural improvement, will, we hope, be as successful as they are praiseworthy.

SUDDEN APPEARANCE OF CLOVER, &c.

The sudden appearance of clover and other plants in places where they have not for a long period appeared before, is an occurrence which has been often noticed, and excited much wonder. Cases of this kind (if we do not mistake,) were mentioned in the article on "Sulphuretted Hydrogen," by L. Bartlett, Esq., published in a late number of this paper. It is a well-known fact that after the clearing of woodland, species of plants often appear, of which no traces had been seen for many years previously, if ever.

That clover reappears in fields where it had not shown itself for a long period before, may be, and is, a somewhat curious circumstance, but not at all inexplicable, if it be known that it *ever had* existed in the same place; for, seeds excluded from the influence of air and fructifying agencies, will often lie dormant for an almost incredible period of time, and of a sudden shoot forth with their wonted vigor. Seeds found in sealed vases excavated at Herculaneum, readily vegetated upon being planted, though they had lain there for centuries. In unrolling an Egyptian mummy at the British Museum, a few years ago, seeds of wheat were found, and planted; and though some thousands of years old, they vegetated and matured their products.

To suppose that any species of vegetation could be *spontaneously generated* in a soil, would be absurd; since in order that such a circumstance should occur, the laws of Infinite Wisdom must be altered; and never, since the Omnipotent spoke creation into birth, instituted the system of nature, and "pronounced it good," has any such deviation from its principles occurred, to the knowledge of man, as the production of a plant *without the agency of a pre-existent germ*. It is established—and finite power cannot change it—that *causes shall precede effects*, and that the attainment of *all ends* depends upon the exercise of *certain prescribed means*; and the spontaneous generation of a plant is as absolutely impossible as the spontaneous generation of a race of animals. Robert Owen, the infidel, remarked to John Randolph, that he might live to see the time when the principle of vitality would be discovered, and human life be perpetuated; and in support of this probability he observed—"Do you not know that in Egypt, by artificial heat, the people create thousands of chickens?" "Yes," replied Randolph—"but pray tell me *where do they get the eggs?* Show me the man who *can lay an egg*, and I will admit the force of your illustration." Not less marvellous would be the production of a plant without the agency of a pre-existent germ, than the production of a chicken without the agency of an egg.

That there is something mysterious, to human comprehension, in the appearance of plants in some cases, unknown to have existed before (or certainly not for a great length of time) in the same place, we do not deny; and the fact furnishes an interesting subject for study to the inquisitive mind; but to account for it by spontaneous generation, is to impute mutability or inconsistency to nature's laws,—and this—to call it nothing worse—is the height of presumptuous folly.

Much as has been learned of the mysteries of vegetable physiology, within the last half century, there is a vast deal more that is mystery still, and which baffles the penetrating vision of science. And the same is true of animal physiology. The mysterious processes of digestion, formation of the blood, &c., have not yet been discovered, nor—as another has observed—"hardly a plausible conjecture offered" in their explanation. "When man is able by any artificial process, to form one drop of blood, to compact one ounce of bone, or to form or color a single flower or leaf," then, and not till then, will he have discovered the key to the wondrous mysteries of nature's processes in animal and vegetable growth. The attainment of this knowledge may not be impossible,—we can imagine *it is not*,—but they who engage in the search for it, cannot fail to be reminded of the exclamation of the enraptured psalmist, in contemplation of the Almighty's works—"How unsearchable is Thy wisdom, and Thy ways past finding out!"

ASHES AS MANURE.

The value of ashes for manure has not been duly appreciated by farmers generally in this section. On Long Island, as is well known, they are extensively used and highly valued. Vessels are often sent from there to the seaport towns along the eastern coast, for the sole purpose of procuring ashes; and many cargoes are annually carried away from Boston and adjacent towns. The leached ashes from some of the soap-manufactories in Roxbury, we are informed, are usually sold to the Long Island farmers. These facts should lead our farmers who have light soils, to ascertain whether *they* might not reap equal benefit from the use of ashes, as those elsewhere; and instead of permitting this valuable fertilizer to be bought up, as it were, at their very doors, and transported to other sections, perhaps they would not *lessen* their reputation for sagacity, nor do *much* detriment to their own interests, should they purchase and use these ashes themselves.

The section of Dr. Dana's Essay published in our last paper, treats of the value of ashes as manure, and we commend his remarks to the attention of all who are interested in the subject. The great value which he gives even to *spent* ashes, may excite surprise in some, as it did with us; yet his statements are, no doubt, based on well ascertained facts.

A late number of the Maine Farmer contained an excellent article by Mr Samuel Stetson, on the use of ashes. One statement of his develops something new to us, though it may not be so to others. He says:—"I have found that wherever a fair dressing of leached ashes, say from 200 to 250 bushels per acre, is used in one year, where potatoes are planted, that for several years afterwards the potatoes grown there are so *scabby* as to be entirely unfit for the market or for table use. * * I have had to *dig* this knowledge out to my cost, and this provoked me to inquire of others, and I found the same result—wherever leached ashes were used, scabby potatoes came after." Mr S. accounts for this effect by the potatoes coming in contact with the lumps of ashes, which "eat off the skin, and leave the potatoes scabby"—and says: "I expect the same result must follow, until the bunches of ashes are dissolved by the plow, rain and frost, and then I expect the mischief will cease, and not before." Notwithstanding this injurious effect of leached ashes on potatoes, Mr Stetson considers them "one of the most valuable manures for grass, grain of all sorts, peas, beans, &c." For wheat, especially, he says he knows of "no manure so valuable, according to its cost, as leached ashes."

DEMAND FOR FRUIT TREES.

From what we know and hear, we judge that the demand for fruit trees this spring, exceeds that of any previous season. Attending to orders for trees, and extending our own nursery, has kept us so closely employed of late, that we have had little time to devote to other business. In fact there seems to exist a sort of fruit tree *mania*, (if the term is pardonable,) and the fact is a matter of gratulation,—not, particularly, on account of any *profit* which it may insure to *us*, as dealers in fruit trees—oh, no!—it would be uncharitable to charge our rejoicing to *that* motive,—but because we believe the business of fruit-raising is one which may be made *profitable to all*. It is a business, we are quite sure, in which those who engage need fear no great detriment from competition, at least for many years to come; and one which is not likely to be "overdone," since the demand for good fruits—apples, in particular—is such as to warrant their far more extensive cultivation. Farmers who are favorably situated in respect to a market, could not, we believe, more surely promote their interests than by making the culture of good fruits a leading object in their husbandry.

THE AYRSHIRE CATTLE.

This breed of cattle, we hear, are coming into favor with our farmers, as their merits are ascertained. Geo. Randall, Esq., of New Bedford, who has imported full bloods of this breed, says: "In my opinion, the Ayrshires are better adapted to the short pasture and fickle climate of New England, than any breed of cattle with which I am acquainted. They are not great consumers of food, and I think give a greater return in butter and milk, for the food they consume, than other breeds." (Trans. N. Y. Ag. Soc.) One of the most distinguished farmers of Massachusetts—a gentleman whose judgment in matters pertaining to husbandry, commands the highest respect—recently informed us that he was turning his attention to the Ayrshires, as being preferable to other breeds for New England, and was about importing some of that breed for his own farm and use. Dr. Holmes, of the Maine Farmer, remarks upon the likeness of an Ayrshire cow, given in his paper, as follows: "The cut is said to represent the breed well, and she certainly looks like a *good-hearted*, motherly, thrifty cow, and such a one as any farmer would not be ashamed of." Most of these cattle in New England were obtained from the importations of Mr Cushing, of Watertown, and Mr Randall, of New Bedford. We presume animals may be had from either of those sources, though of this we are not certain.

NEW ENGLAND FRUIT BOOK.

Messrs. Ives, of Salem, have published in a handsome volume, a practical treatise on Fruit and its culture. It gives a descriptive catalogue of the most valuable varieties of the Pear, Plum, Apple, Peach and Cherry for New England culture, by Robert Manning. To which is added other varieties: also the Grape, Quince, Gooseberry, Currant and Strawberry, with outlines of many of the finest Pears, drawn from nature; with directions for pruning, budding, grafting, and general modes of culture. Second edition, enlarged, by John M. Ives.

MASS. HORTICULTURAL SOCIETY.

EXHIBITION OF FLOWERS.

Saturday, April 20, 1844.

Wm. E. Carter, of the Botanic Garden, Cambridge, exhibited two beautiful specimens of the Azalea, viz: variegata, and another beautiful variety.

For the Committee, J. BRECK, *Chm'n.*

THERMOMETRICAL.

Reported for the New England Farmer.

Range of the Thermometer at the Garden of the proprietors of the New England Farmer, Brighton, Mass. in a shaded Northerly exposure, to the week ending April 21.

April, 1844.		7 A.M.	12, M.	5, P.M.	Wind.
Monday,	15	61	62	47	E.
Tuesday,	16	44	53	53	E.
Wednesday,	17	56	65	52	N. W.
Thursday,	18	32	41	48	E.
Friday,	19	30	58	48	E.
Saturday,	20	39	53	47	N. E.
Sunday,	21	46	52	44	E.

BRIGHTON MARKET.—Monday, April 22, 1844.

Reported for the N. E. Farmer.

At Market 300 Beef Cattle, 15 pairs Working Oxen, 620 Sheep, and 1350 Swine. 40 Beef cattle unsold.

Prices.—*Beef Cattle.*—Higher prices were obtained, and we advance our quotations to correspond. Extra $5,25. First quality $4,50 a 4,75; second quality $4,25 a $4,75; third quality $3,50 a $4,00.

Working Oxen —Sales, 65, 68, 75, and $82.

Sheep —Sales from $2,50 to $3,75. A small lot of cosset weathers 5,00 a $6,00.

Swine.—Sales quick. Lots to peddle 5, 5 1-4 and 5 3-8 for sows, and 6, 6 1-4 and 6 3-8 for barrows. At retail from 5 to 7.

WHOLESALE PRICES CURRENT.

Corrected with great care, weekly.

SEEDS. Herds Grass, $2 00 to 2 25 per bushel. Red Top 60 to 65 cents. Clover—Northern, 10 to 11c.—Southern, 8 a 9 c. Flax Seed, $1 50 per bushel. Lucerne, 33 c. per lb. Canary Seed, $2 62 per bushel.

GRAIN. The late news from England, is less favorable to shippers, and the heavy arrivals at this market during the past week, have caused some further reduction in prices.

Corn—Northern, new, bushel 56 to 58—Southern, round yellow, old, 00 a 00—Southern flat yellow, new, 54 a 55—do. do. white 49 a 50—do New Orleans, 00 a 00—Barley 00 a 00 —Rye, Northern, 70 a 72—do. Southern, 65 a 70 —Oats, Southern, 30 a 32—Northern do. 34 to 35—Beans, per bushel 1 00 a 1 62.—Shorts, per double bush. 00 a 0 0—Bran, 00 a 00.

FLOUR. The business of the week has been rather limited; prices are without much variation, compared with the last report.

Baltimore, Howard Street, 4 mos. cr. $0 00 a 5 00—do. wharf, $0 00 a 4 87—do. free of garlic, $4 87 a 5 00—Philadelphia do. 4 mos. $0 00 a 4 87 —Fredericksburg, low l'd 4 mos. $4 87 a 4 94—Alexandria, wharf mountain, 0 00 a 0 00. —Georgetown, $4 87 a 5 25—Richmond Canal, $4 87 a 5 00 —do. City, $0 00 a 0 00—Petersburgh, South side $0 00 a 5 25 —do. Country $4 87 a 5 00—Genesee, common, cash, $0 00 a 5 18— do fancy brands $5 25 a 5 37 — Ohio, via Canal, $0 00 a 0 00—do do New Orleans, cash $4 87 a 5 12. Rye, $3 50 a 0 00—Indian Meal in bbls. $2 87 a 3 00.

PROVISIONS. The demand for Pork and Beef during the past week has been confined chiefly to the wants of the trade, and for vessels' use.

Beef—Mess 4 mo. new bbl. $6 75 a 7 25—Navy—$6 00 a 6 50.—No. 1, $5 87 a 6 00—do Prime $5 00 a 5 50—Pork—Extra clear 4 mo. bbl. $12 50 a 00 00—do Clear $11 00 a 12 00 do. Mess, 9 00 a 10 00—do Prime $7 50 a 8 00—do Mess from other States,— a — —do Prime do do $0 00 a 0 00 do. Cargo do. 0 00 a 0 00 —Clear do do $00 00 a 00 00—Butter, shipping, 15 a 18—do store, uninspected, 10 a 12—do dairy, 18 cts. a 20—Lard, No. 1, Boston ins. 6¼ a 7 —do South and Western, 6 a 6¾ — Hams, Boston, 7 a 7½ — Southern and Western, 6½ a 0—Cheese, Ship'g and 4 meal, 3 a 4½ —do new milk, 4½ a 5½.

WOOL. Duty. The value whereof at the place of exportation shall not exceed 7 cts. per pound, 5 per cent. ad val. All whereof the value exceeds 7 cts. per pound, 40 per ct. ad. val. and 3 cts. per pound.

We have no change to notice in this article. There is a fair demand, and prices are firm, with but a limited supply.

Prime or Saxony Fleeces, washed, lb. 45 a 50 c.—American full blood, do 43 a 45—Do. 3-4 do 37 a 40—Do. 1-2 do 33 a 35—1-4 and common do 28 a 32 — Smyrna Sheep, washed, 20 a 25— Do. unwashed, 10 a 15 — Bengasi do 6 a 13—Saxony, clean, 00—Buenos Ayres unpicked, 7 a 10—do. do. picked, 10 a 15—Superfine Northern pulled lamb 37 a 40—No. 1 do. do. do. 32 a 35—No. 2 do do do 25 a 30—No. 3 do do do 18 a 20.

HOPS. Duty 20 per cent.

The market is exceedingly dull for this article, and some sales have been made by growers, at a reduction on previous quotations.

1st sort Mass. 1843, lb. 7 a 7½; 2d do 6 a 00.

HAY, 14 to 16 per ton—Eastern Screwed $10 to 12.

EGGS, 12 a 14.

FARM FOR SALE.

One of the most pleasant situations in the middle of the town of Pepperell—the farm of the late Rev. James Howe, containing 44 acres of first rate land, well divided into mowing, tillage, pasturing and wood land, well watered and fenced, with a two story house and two barns, one 36 by 40 feet, with a cellar under the same, and all other convenient out buildings. There are a variety of fruit trees on the farm. *Terms easy.* For further particulars inquire of SETH NASON, on the premises, or to JOSEPH BRECK & CO., 51 and 52 North Market Street, Boston. April 20.

POTTAWATTAMIE BEAN.

The subscribers are happy to inform their customers and friends that they have received a new and superb variety of early BUSH BEAN, of excellent flavor, and very prolific. It surpasses in beauty any variety now cultivated among us. The name of "Pottawattamie" has been given to it on account of its having been received from that tribe of Indians in Iowa, by whom it is cultivated. Price 37½ cents per quart. JOSEPH BRECK & CO.

Boston, April 17, 1844.

SPLENDID FLOWER SEEDS.

The subscribers have received the following choice Flower Seeds which they offer at 6 1-4 cents per package, except those marked otherwise.

Extra fine German Asters, 8 varieties.
Fine double Balsams (sorts.)
Extra fine do. 12½ cents.
Cosmos bipinnatus 12 "
Campanula pulcherrima 12½ cents.
——— pyramidalis alba 12½ cents.
——— do. azurea 12½ cents.
Chinese Primrose 12½ cents.
Cleome Grandiflora 12½ cents.
Didiscus cerulea 12½ cents.
Erysimum Peroffskiana.
Geraniums, from superb flowers 33½ cents.
Lupinus pollyphyllus 12½ cents.
——— var alba 12½ cents
——— rivularis 12½ cents.
——— Crookshankii 12½ cents.
——— splendens 12½ cents.
——— odoratus 12½ cents.
Lophospermum Siandem 12½ cents.
Mimulus Hudsonia 12½ cents.
——— cardinalis splendens 12½ cents.
Madagascar periwinkle 12½ cents.
Pentstemon Millerii 12½ cents.
——— hybridus 12½ "
——— gentianoides 12½ cents.
——— splendens 12½ "
Salpiglossis, fine sorts 12½ "
Schizanthus Hookerii 12½ "
——— obtusifolia.
——— new white.
——— humilus.
——— pinnata.
Portulacci Gilesii, 25 cents.
Phlox Drummondi 12½ "
Verbena, fine scarlet, and from other choice sorts 12½ cts.
——— subletia.
——— urticifolia—With many other rare sorts.

JOSEPH BRECK & CO.

Boston, April 19, 1844.

FINE BONE MANURE.

The subscribers have on hand, Fifty Barrels of fine pulverised Bone Manure, mixed with the marrow of the bone. It was produced from a manufactory when the bone was sawed in a wet state. It must be a very valuable article.

Also, Fifty Barrels fine Bone Dust, in a dry state, principally saw dust, and the refuse of a manufactory.

March 20, 1844. JOSEPH BRECK & CO.

FINE PICOTEE PINK SEED.

The subscribers have for sale a few packages of Pink Seed, saved from the varieties of double Pinks which were exhibited by them at the Horticultural Rooms, and for which they obtained premiums the last season. This is probably the finest seed of American growth ever offered for sale. Price 25 cents per package. Also extra fine English Picotee and Carnation seed at 12½ cents per package.

JOSEPH BRECK & CO.

Boston, March 6, 1844.

MUCK MANUAL.

The Farmer's Muck Manual, by Dr. S. L. Dana—price 62 1-2 cents, for sale by JOS. BRECK & CO.

Dec. 11.

JOSEPH BRECK & CO.,

NEW ENGLAND

Agricultural Warehouse

AND

SEED STORE.

51 and 52 North Market Street, Boston.

JOSEPH BRECK & CO. having received a full and general assortment of FIELD, GRASS, GARDEN and FLOWER SEEDS, worthy of cultivation, confidently recommend them as being pure and of the first qualities, unmixed with other varieties; they have no hesitation in saying that their collection of Seeds is the best, and of the greatest variety ever offered for sale at any establishment in the U. States, and would invite all to send in their orders as soon as possible, that they may supply themselves with the choicest varieties in good season for the Spring planting.

The following are a few of the most important kinds which they offer wholesale and retail, viz:

PEAS.

Cedo Nulli, Hills' Early, Early Dwarf, do. Charlton, do. Frame, do. Warwick, Improved Blue Imperial, Woodford's Dwarf Marrow, Bishop's Dwarf, for borders, Knights' Dwarf, Dwarf Marrowfats, Tall do.

BEANS.

Lima, Saba, Horticultural Pole, Dwarf China, do. Mohawk, do. Marrow, Red Cranberry Pole, White do. do. Kidney Pole, Dwarf Kidney, do. Case knife, do. Six Weeks, &c.

CABBAGES.

Large Late Drumhead, Late Sugar-loaf, Green Globe Savoy, Red Dutch, Low Dutch, Early York, Battersea, Vanack, Hope, Early Sugar-loaf, with a complete variety of other kinds.

Long Blood and Turnip Beets, French Sugar Beets, Mangel Wurtzel, Ruta Baga, Long Orange, Early Horn and White Field Carrots, Early and Late Cauliflowers, Broccolis of all sorts, Cucumbers, Melons, Squashes, sweet Marjorum, Sage, Summer Savory, Thyme, and Turnips, more than twenty fine varieties.

They have just received per Ship Minerva, a fine and choice lot of new Flower Seeds, which together with an assortment of over four hundred kinds, comprise the most complete collection ever offered for sale.

FRUIT AND ORNAMENTAL TREES,

Shrubs, Grape Vines, Roses, Dahlias, Green-house Plants, Rhubarb and Asparagus Roots, and all Nursery productions furnished at one day's notice, and when requested, can be packed in mats and boxes, so as to be sent to Europe or any part of America.

Dealers supplied on the most liberal terms with Seeds of various sizes, containing a complete assortment, neatly put up in papers, labelled and sealed ready for retail, with printed directions on each package for its management and cultivation.

GRASS SEEDS,

At wholesale and retail, at the lowest market prices. Also, Kentucky Blue Grass, a first rate article for Lawns. Clover Seed, Red and White, Orchard Grass, Oat Grass, Fowl Meadow, Northern and Southern Red Top, Barley, Oats, Millet, Rhode Island Grass, Buckwheat, &c., &c., of the best quality and for sale low.

AGRICULTURAL BOOKS of all kinds, constantly on hand.

AGRICULTURAL AND GARDEN IMPLEMENTS of all kinds, among which are the following, viz:—1000 Howard's Patent Cast Iron Ploughs, 200 Common do. do, 200 Cultivators, 100 Greene's Straw Cutters, 50 Willis' do. do. 100 Common do. do, 100 Willis' Patent Corn Shellers, 50 Common do. do, 200 Willis' Seed Sowers, 50 do. Vegetable Cutters, 50 Common do. do., 200 Hand Corn Mills, 200 Grain Cradles, 100 Ox Yokes, 1500 Doz. Scythe Stones, 3000 do. Austin's Rifles, 100 doz. Cast Steel Shovels, 150 do. Common do. 100 do. Spades, 500 do. Grass Scythes, 300 do. Patent Snaiths, 200 do. Common do., 500 do. Hay Rakes, 200 do. Garden do., 200 do. Manure Forks, 300 do. Hay do. 500 Pair Trace Chains, 100 do, Truck do. 100 do. Draft do, 500 do. Tie up do, 50 doz. Halter do, 1000 yards Fence do, 25 Grind Stones on Rollers.

JOSEPH BRECK & CO.,

N. E. Agricultural Warehouse and Seed Store, 51 and 52 North Market Street, Boston.

FRUIT TREES.

The subscribers are prepared to furnish every description of Fruit Trees, and Ornamental Trees, Shrubs and Plants. The autumn is a suitable time to transplant many Trees and Plants, and often times more convenient than in spring. We have as great a variety of Apples, Pears, Cherries, Plums, Peaches, Quinces, Currants, Gooseberries, &c. as can be found in the country, and offer them at the lowest prices. JOSEPH BRECK & CO.

Boston, Oct. 11, 1843.

NITRATE OF SODA FOR AGRICULTURAL PURPOSES.

BENJAMIN BANGS, No. 39 & 40, Lewis' Wharf, has for sale, a quantity of the above named article, which has been much approved of in England, and as far as used in this country has been found highly beneficial on grass land, trees and plants generally.

Boston, March 20, 1844. 3m

MISCELLANEOUS.

The following anecdote is said to have actually occurred in the western part of the State of Massachusetts: "An agent soliciting subscriptions for a life of Bonaparte, showed his prospectus to a man, who read thus: 'one dollar in *boards*, or one dollar and twentyfive cents in *sheep*.' After considering for a moment, he replied, that when he should be called upon for the subscription, he might not have either *boards* or *sheep* on hand, and therefore he 'guessed' he had better not subscribe."

Steaming it.—"Talk about your northern steamboats," said a Mississippi fireman the other day, "why, you haint had a biler bust for five years! Don't require no spunk to navigate them waters; any fool can do it. But it takes a man, stranger, to run one of our alligator boat's head on to a sawyer, high pressure and the valve soddered down, six hundred passengers on board, and every soul endangered!"

WARREN'S GARDEN AND NURSERY,

NONANTUM VALE, BRIGHTON,

FLORAL SALOON AND SEED STORE,

No. 1 *TREMONT TEMPLE,* (*late Tremont Theatre*) BOSTON.

The proprietor of this establishment is now ready to receive and execute orders for Fruit; Ornamental Trees; Grape Vines; Shrubbery; Roses; Strawberry Plants, &c. in any quantity and of the most valuable kinds at short notice, properly packed and secured for transportation to any part of the United States or Provinces.

The catalogue for 1844 which has been prepared with scrupulous care, contain a list of the choicest sorts of Pears; Apples; Plums; Cherries; Peaches; Apricots and Nectarines; Grape Vines; Raspberries; Gooseberries; Strawberries; Currants; Evergreen Trees and Shrubs; Ornamental Trees; Herbaceous Plants; Roses; Green House Plants; Dahlias, &c.

A new feature has been added in the catalogue which renders it particular valuable for purchasers who are desirous of improving their orchards and grounds by planting only the most approved, superior and productive varieties. It is by columns and abbreviations, the meaning of which is explained under every different kind of fruit, so that a large number of the most important characters by which the different varieties are distinguished may be seen at a glance.

While the list of fruits may not be found so extensive as in some other catalogues, it contains every kind of value, and all new and improved varieties are added as soon as their qualities are tested. Nevertheless any variety that may be ordered can always be supplied, on as reasonable terms as are afforded any other nurseries.

The list of *DAHLIAS* comprises upwards of 300 of the choicest varieties of this gorgeous and splendid flower, most of them prize varieties. Dry roots ready for delivery early in the spring, and in pots from the middle of April to the 1st June.

STRAWBERRIES of the most productive and best varieties, for sale in any quantity. None but healthy and strong plants will be suffered to leave the nursery.

GRAFTS and *SCIONS* of most of the kinds named in the Catalogue can be obtained in their season.

GREEN HOUSE PLANTS, of all the rare and splendid kinds, always on hand at the Saloon, where visitors are respectfully invited to call.

GRAPE VINES; ASPARAGUS, and other roots constantly for sale.

Also, a great variety of choice *GARDEN* and *FLOWER SEEDS,* all of this year's growth, and warranted fresh, genuine and true to their names.

Agricultural, Horticultural and Botanical Books.

Gardening Implements; Flower Vases, &c. &c. The whole enumerated in a new descriptive Catalogue, which will be given *gratis* on application. All orders for trees will be delivered at one day's notice. Every tree and plant will be warranted by the subscriber, as to its distinctive character and goodness.

Boquets and cut flowers, can be obtained any day in the week at the saloon. Flowers furnished for decorations, at short notice. JAMES L. L. F. WARREN.

April 3.

WINSHIP'S NURSERY.

BRIGHTON NEAR BOSTON,

Situated on the line of the Boston and Worcester Rail Road, 5 miles from the city.

The season for transplanting is at hand, and all those who wish to supply themselves with choice Fruit and ornamental Trees, can be furnished at short notice with the finest varieties by the proprietors of this celebrated nursery.

Fruit Trees, including all the varieties of Pears, Peaches, Plums, Nectarines, Cherries, &c. &c.

Cotalogues may be obtained by applying at the Nursery.

Trees carefully packed to insure safety in long voyages.

Orders lsft at the New England Seed Store of J. Breck & Co Nos.51 & 52 North Market street, will be delivered the day following.

Letters containing orders, addressed to the subscribers, J. & F. WINSHIP.

March 27, 1844.

CAMBRIDGEPORT NURSERY.

Columbia Street.

SAMUEL POND, NURSERYMAN,

CAMBRIDGEPORT, MASS.

Has for sale a choice assortment of FRUIT TREES, SHRUBS, ROOTS AND VINES.—Among them are the best varieties of Apple, Pear, Plum, Cherry, Peach, Apricot, Grape Vines, Asparagus, Rhubarb, Currants, Gooseberries, Raspberries, Pear Stocks, Apple Stocks, &c. &c. &c.

TREES of an extra size always on hand, and will be delivered to any part of the city, free of expense.

Also scions of Pears, Plums and Cherries.

FRUIT AND ORNMENTAL TREES, &C.

S. & G. HYDE'S NURSERY, NEWTON.

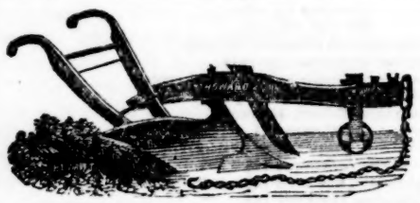
The subscribers have for sale a choice collection of Fruit Trees, comprising the best varieties of Apples, Cherries, Peaches, Pears, Plums, &c.

Gooseberries, Currants, Raspberries, Grape Vines, and Quinces.

Ornamental Trees and Shrubs, Honeysuckles, Altheas, Pœonies, Buckthorn, &c.

All orders addressed to the subscribers will receive prompt attention. Trees packed to insure safety to distant places. S. & G. HYDE.

Newton, April 3, 1844.



HOWARD'S IMPROVED EASY DRAUGHT PLOUGH.

Great improvements have been made the past year in the form and workmanship of these Ploughs; the mould board has been so formed as to *lay the furrow completely over, turning in every particle of grass or stubble, and leaving the ground in the best possible manner.* The length of the mould board has been very much increased, so that the Plough works with the greatest ease, both with respect to the holding and the team. The Committee at the late trial of Ploughs at Worcester, say,

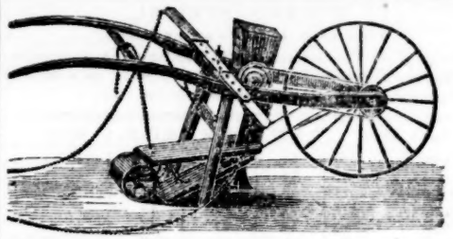
"Should our opinion be asked as to which of the Ploughs we should prefer for use on a farm, we might perhaps say to the inquirer, if your land is mostly light and easy to work, try Prouty & Mears, but if your *land is heavy, hard orrocky,* BEGIN WITH MR. HOWARD'S."

At the above mentioned trial the Howard Plough *did more work, with the same power of team, than any other plough exhibited.* No other turned more than twentyseven and one half inches, to the 112 lbs. draught, while the *Howard Plough turned twentynine and one half inches, to the same power of team!* All acknowledge that Howard's Ploughs are much the strongest and most substantially made.

There has been quite an improvement made on the shoe, or land side of this Plough, which can be renewed without having to furnish a new landside; this shoe likewise secures the mould board and landside together, and strengthens the Plough very much.

The price of the Ploughs is from $6 to $15. A Plough, sufficient for breaking up with four cattle, will cost about $10 50, and with cutter $1, with wheel and cutter, $2 50 extra.

The above Ploughs are for sale, wholesale and retail, at the New England Agricultural Warehouse and Seed Store, Nos. 51 & 52 North Market Street, by JOSEPH BRECK & CO.



WILLIS' LATEST IMPROVED SEED SOWER.

In using this machine, the farmer may be certain that his seed is put into the ground, and at the same time in the best possible manner. There has been a great difficulty in machines for sowing garden seeds; they are very apt to clog up, and the farmer might go over an acre of land and not sow a single seed; but not so with this; it is so constructed that it cannot possibly clog. In using this sower, the farmer can save one half of his seed, and do the work at less than one quarter the expense of the common way of sowing, and have it done in a much better manner; it opens the furiow, drops the seed covers it over and rolls them down. It will sow any kind of Garden Seeds; say Ruta Baga, Mangel Wurtzel, Turnips, Carrots, Beets, Parsnips, Onions, &c. For sale at the New England Agricultural Warehouse and Seed Store, Nos. 51 and 52 North Market street, by JOSEPH BRECK & CO.

NONANTUM HILL.

NURSERY OF WILLIAM KENRICK.

Baldwin and other Apple Trees of fine sizes, 10,000 Peach Trees, also of kinds superior and of sizes fine; Pear, Plum, Cherry, Apricot, Nectarine Trees of kinds new or most highly esteemed.

This nursery, by late extensions, now covers 30 acres of ground. A large green house is now being added.

Franconia Raspberries, Grape Vines, Currants Gooseberries, Strawberries—of kinds most approved. The descriptive Catalogue for 1843 will be sent to all who apply.

Ornamental Trees and Shrubs, and Honeysuckles; yellow Harrison and other Roses; Tree and other splended Pœonies of different colors. Also, Myatt's Victoria and other new kinds of Rhubarb, double Dahlias, &c. &c.

All orders addressed to the subscriber will be promptly attended to, and Trees when so ordered will be securely packed in mats and moss for safe transport to all distant places, and delivered in the city by the wagon which goes hither daily, or shipped to order, or per railroad. Orders may be left with Joseph Breck & Co. 51 & 52 North Market street, John G. Locke, Esq., or Eliphalet Wheeler, Esq., Framingham. WILLIAM KENRICK.

March 6. eptM15 Nonantum Hill, Newton.

SCIONS FOR GRAFTING.

Those who wish to obtain Scions for grafting, are reminded that this month is the time to cut grafts. It is important that orders should be sent during the month to ensure execution, as it is impossible to keep a full assortment on hand. We have a supply of the following, cut from bearing trees, viz: *Apples*—Baldwin, Greening, Roxbury Russet, Porter, Hubbardston, Nonsuch, and other varieties.

Pears.– Bartlett, Seckle, Jargonelle, and other varieties can be cut if ordered.

Also, Plum and Cherry Scions.

JOSEPH BRECK & CO.

Boston, March 20, 1844.

GRINDSTONES ON FRICTION ROLLERS.

Grindstones of different sizes, hung on friction rollers and moved with a foot treader, are found to be a great improvement on the old mode of hanging grindstones. Stones hung in this manner are becoming daily more in use, and wherever used, give universal satisfaction. The rollers can be attached to stones hung in the common way. For sale by J. BRECK & Co., No. 51 North Market street.

NEW ENGLAND FARMER.

A WEEKLY PAPER.

Terms, $2 per year *in advance,* or $2 50 if not paid within sixty days.

N. B.—Postmasters are permitted by law to frank all subscriptions and remittances for newspapers, without expense to subscribers.

TUTTLE AND DENNETT, PRINTERS.

21 School Sttree.